

**REMARKS**

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

The claims of the referenced application have been amended in accordance with U.S. Patent Practice. Claims 1 and 3 have been incorporated into claim 2, and are now cancelled. Claim 16 has been incorporated in to claims 13 and 14, and is now cancelled. Accordingly, claims 2, 4-15, and 17-18 remain pending in the application.

The abstract of the disclosure is objected to because of minor informalities. In response, Applicants have amended the abstract of the disclosure, in accordance with the Examiner's suggestion. Accordingly, the objection should be withdrawn.

Claims 2-4, 13-14, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In response, claims 2, 4, and 13-14 have been amended and the rejection should be withdrawn.

Claims 13, 14 and 16 are rejected under 35 USC §102(b) as being anticipated by Sano et al. (US 7, 272, 162). In response, claims 13 and 14 have been amended to recite, "wherein the given useful frequency band is the FM band" and these claims are believed to be patentable over Sano et al. for the reasons discussed below.

Regarding amended claims 13 and 14, Applicants submit that Sano does not disclose or suggest that a given useful frequency band for a demodulation receiving digital signals on the FM band. By contrast, Sano discloses a transmitter/receiver for spread-spectrum communication system to perform frequency-hopping spectrum spreading using a predetermined number of subcarriers (see Sano, column 7, line 54-column 8, line 54). However, Sano does not disclose or suggest performing frequency-hopping only in the FM band. Accordingly, Applicants submit that claims 13 and 14 are patentable and the rejection should be withdrawn.

Claims 1-9 are rejected under 35 USC §103(a) as being unpatentable over Laamanen et al. (WO/00/31939) (see IDS) in view of Wright et al. (US 6,704,297). Applicants respectfully traverse this rejection.

Regarding amended claim 2, Applicants submit that Lammanen and Wright do not disclose or suggest a method of modulating digital signals over the associated channels, wherein the channels are defined by taking account of a predetermined minimum distance between the channels. Lammanen discloses a method of dividing the transmission bandwidth into subchannels in modems based on multicarrier modulation techniques, wherein the subchannels may be allocated in equal or unequal bandwidths (see Lammanen, page 4, lines 9-27). The Examiner concedes that Lammanen does not explicitly disclose defining channels  $C_n$ , of width  $I_n$  in frequency, lying within an associated part  $P_n$ , the channels  $C_n$  being separated. The Examiner attempts to overcome the deficiency with Wright. Wright discloses a downlink orderwire integrator for use in a processing satellite in a satellite based communications system, wherein each frequency band in the satellite based communications system is separated into subchannels with equal bandwidths (see Wright, column 4, lines 20-25). Both Lammanen and Wright disclose methods to separate a frequency band into multiple channels, however, neither Lammanen nor Wright disclose or suggest defining the channels based on the minimum distance between the channels. Accordingly, Applicants submit that amended claim 2 is patentable over Lammanen and Wright, and the rejection should be withdrawn.

Regarding claim 7, Applicants submit that Lammanen and Wright do not disclose or suggest that a method of performing signal modulation in a given useful frequency band, wherein the given useful band is the FM band. Lammanen discloses a method of dividing the transmission bandwidth into subchannels in modems based on multicarrier modulation techniques, wherein the subchannels are in the AM band (see Lammanen, page, 2, lines 9-18). Wright discloses a downlink orderwire integrator for use in a processing satellite in a satellite based communications system, wherein each frequency band in the satellite based communications system is separated into subchannels with equal bandwidths (see Wright,

column 4, lines 20-25). Nowhere does Lammanen and Wright disclose or suggest performing signal modulation in a given useful frequency band, wherein the given useful band is an FM band. Accordingly, Applicants submit that claim 7 is patentable over Lammanen and Wright, and the rejection should be withdrawn.

In addition, claims 4-6 and 8-9 depend, either directly or indirectly, from claim 2, includes further important limitations, and are patentable over Lammanen and Wright for at least the reasons above with respect to claim 2.

Claims 10-12, 15, 17 and 18 are rejected under 35 USC §103(a) as being unpatentable over Laamanen and Wright as applied to claim 8 above, and further in view of Yong et al. (US 6,801,570). Applicants respectfully traverse this rejection.

Regarding claim 12, Applicants submit that the Examiner has failed to properly reject claim 12 because the Examiner did not provide adequate citations from any of the cited references for the rejection. Further, Applicants submit that Laamanen, Wright, and Yong fail to disclose or suggest the limitations recited in claim 12. Accordingly, Applicants submit that this rejection is improper and should be withdrawn.

Regarding claim 15, Applicants submit that Lammanen and Wright do not disclose or suggest that a method of performing signal modulation in a given useful frequency band, wherein the given useful band is the FM band. As noted above, Applicants submit that nowhere does Lammanen and Wright disclose or suggest performing signal modulation in a given useful frequency band, wherein the given useful band is the FM band. Applicants further submit that Yong fails to disclose or suggest the limitations recited in claim 15. Yong discloses a method for dedicating bandwidth to at least one bearer channel in a multicarrier communication system (see Yong, column 3, lines 36-58). Nowhere does Yong disclose or suggest performing signal modulation in a given useful frequency band, wherein the given useful band is the FM band. Accordingly, Applicants submit that claim 15 is patentable over Lammanen, Wright, and Yong, and the rejection should be withdrawn.

In addition, claims 10-12 and 17-18 depend, either directly or indirectly, from claim 2, includes further important limitations, and are patentable over Lammanen, Wright, and Yong for at least the reasons above with respect to claim 2.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited. Early issuance of a Notice of Allowance is courteously solicited. The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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